maxillary nerve instead of simply dividing or resecting it within the orbital cavity, as these operations only afford a momentary relief.—*London Med. Record*, Feb. 15, 1879.

Suture of Nerves.

Dr. BAKOWIECKI, working in the histological laboratory at Kiew (*Gaz. Médic. de Paris*, October 26, 1878) on the condition of nerves after suture, finds that the suture of nerves considerably hastens their cicatrization, and the re-establishment of their functions; that it is necessary to unite the cut nerves within twenty-four hours of their section, and to perform the operation in such a way as to prevent the ligature from passing through any structure except the neurilemma; and that sutures of catgut must be alone employed, as they do not cause suppuration, whilst they are wholly absorbed in the wound. Suture prevents the appearance of tetanus. Eulenberg and Landois obtained negative results because they passed the ligature through the whole thickness of the nerve. The experiments of Dr. Bakowiecki were made upon various animals; they were one hundred in number; the nerves sewn were the sciatic, vagus, and hypoglossal. The sutures employed were of silk, silver, and catgut prepared by Lister's method. The microscopical appearances seen were in the negative cases, in which no regeneration of the nerves took place, destruction of the axis cylinders. In the positive cases, in which there was regeneration of the nerve-fibres, a bud made its appearance at the end of the axis cylinder of the nerve. After a lapse of thirty days, filaments (axis cylinders) were seen, which appeared to consist of fusiform cells communicating with each other by their prolongations. Around the filaments a pale contour line could be distinguished; this line the author believes to be the medullary sheath. The filaments themselves join directly the original nerve-fibres of the central end of the cut nerve. The author supposes that new nerves are thus formed, and he bases his supposition upon three facts. In the first place, the filaments just described pass directly into the nervous fibres. Secondly, the portion of regenerated nerve is composed of these fibres. The nerve, when so formed, is found to have recovered its functional properties. Lastly, the filaments are strongly stained by carmine, and they act in the presence of certain chemical reagents in exactly the same way as do the true axis cylinders. The pale contour-line is supposed to be the medullary substance of the nerve, and not the neurilemma or sheath of Schwann, because no nuclei have been found in it.—*London Medical Record*, Feb. 15, 1879.

Nerve-Stretching in Tetanus.

Dr. J. J. L. RATTON, Professor of Surgery at the Medical College, Madras, has published a small pamphlet with the praiseworthy object of encouraging the study of tetanus, and especially its treatment. Hospital statistics which he gives show that the disease at Madras is most prevalent and fatal in April, and least so in September and December. It affects natives more than it does Europeans, apparently because the native is more exposed to the changes of temperature between night and day. He has had more cases in patients kept in sheds out in the open air than in the wards of the general hospital; and cases frequently occurred after a rain storm. Regarding treatment, he is most in favour of chloral hydrate, but it must be given very boldly and continuously in heroic doses, kept up for at least a week or ten days. Drachm doses should be given every two or three hours till the patient is so far narcotized that he lies in a state of sleep, from which he can be roused to take food in a mechanical way at intervals. When the narcotism has been established the medicine may be given less frequently. Dr.

Ratton declares that it is worse than useless to give the chloral timidly or intermittently. He devotes some attention to nerve-stretching, of which his impression is favourable, as a means "of modifying the conductivity of the whole nerve, from its roots to its termination, and of establishing a new and healthier action in it." He gives four cases in which he performed this operation, but of the four three were fatal, although the *clonic* spasms of the limbs appeared to be controlled. The patient who recovered was kept under the influence of chloral for a fortnight after the operation. The other patients died from exhaustion, and would probably have died under any treatment. Dr. Ratton does not seem to think the carbolic spray essential to the operation of nerve-stretching, and, curiously enough, seems to consider that suppuration in the course of the nerve that is stretched is "an important factor in the remedial action of nerve-stretching."—*Med. Times and Gazette*, Jan. 18, 1879.

OPHTHALMOLOGY AND OTOLOGY.

Ophthalmoplegia Externa or Symmetrical Paralysis of the Ocular Muscles.

At a late meeting of the Royal Medical and Chirurgical Society (*Lancet*, Feb. 15, 1879) Mr. JONATHAN HUTCHINSON read a paper on this subject. He commenced by stating that the term ophthalmoplegia had been used by Graefe ten years ago in reference to the class of cases dealt with in this paper; and that more recently Eulenberg, writing of the same cases, had applied the appropriate adjective, progressive. The affection had not, however, he believed, received any notice from English writers. Most of its best marked examples occurred to adults who had suffered from syphilis many years before, but it had been recognized in connection with inherited syphilis, and in some cases without any assignable cause. Its essential feature is bilateral paralysis of the external muscles of the eyeballs; and it sometimes proceeded to such an extent that the eyes were almost motionless in their orbits, and the patient compelled to move his head from side to side when he wished to change the direction of vision. A remarkable fact, however, is that the paralysis rarely proceeds to absolute paralysis, and rarely affects all the muscles in the same degree Sometimes one or two wholly escape. The lids always droop over the eyes, giving to the patient the appearance of being half asleep; but it is seldom that there is complete ptosis. Ophthalmoplegia interna and paralysis of the iris and ciliary muscle is often present also, but it may be wholly absent. In some cases the optic centres are affected, and blindness with white atrophy results. The facility with which the progress of the disease is influenced by iodide of potassium probably in large measure accounts for the frequent incompleteness of the paralysis, and for the circumstance that it does not always manifest progressive tendencies. In advanced cases the spinal cord is affected, and symptoms of locomotor ataxy are developed, or other forms of paralysis. The author then proceeded to narrate in abstract the particulars of fifteen examples of the malady, thirteen of which had been under his own observation, and two under that of Mr. Warren Tay. In the study of several of these cases he had to acknowledge the able assistance of Dr. Hughlings-Jackson, and in the only one in which an autopsy had been obtained Dr. Jackson was present at it, and the microscopic examination of the brain had been made with great care by Dr. Gowers. The following summary of the clinical evidence was appended: "The facts are too few to admit of statistical analysis, but a brief summary may perhaps be useful. Of the fifteen cases four only occurred in females, and two of these were children. One of the males